

AMENDMENTS TO THE CLAIMS

1. (Presently amended) An exposure device comprising:

a substrate ~~(1)~~;

an emissive element array provided on said substrate ~~(1)~~ and having a plurality of organic EL emissive elements ~~(2)~~ arranged linearly; and

a drive circuit ~~(4)~~ provided on said substrate ~~(1)~~ and including an element switching said organic EL emissive element ~~(2)~~,

wherein said organic EL emissive element ~~(2)~~ has an edge emission structure emitting light in an edge direction that is perpendicular to a direction of deposition of electrode layers ~~(12, 15)~~ and organic compound layers ~~(13, 14)~~, and

an emitting area of one emissive element, (S), as viewed in said direction of deposition, and a period of the emissive elements disposed side by side, (d), satisfy the relationship of $S > d^2$.

2. (Presently amended) The exposure device according to claim 1, wherein said organic compound layers ~~(13, 14)~~ have a thickness that is smaller than a central emission wavelength, and

said exposure device has an optical waveguide layer ~~(3)~~ with a thickness greater than said central emission wavelength on a side of said electric layer ~~(12, 15)~~ opposed to said organic compound layers ~~(13, 14)~~.

3. (Presently amended) The exposure device according to claim 2, wherein said optical waveguide layer ~~(3)~~ has a first transparent layer ~~(5)~~ of a refractive index of n_1 in contact with said organic EL emissive element ~~(2)~~ and a second transparent layer ~~(6)~~ with a refractive index of n_2 in contact with a portion of said first transparent layer ~~(5)~~ that is out of contact with said organic EL emissive element ~~(2)~~, and

the refractive index of said first transparent layer ~~(5)~~, n_1 , and the refractive index of said second transparent layer ~~(6)~~, n_2 , satisfy the relationship of $n_1 > n_2$.

4. (Presently amended) The exposure device according to claim 3, having a light-absorbing shading wall ~~(16)~~ between said optical waveguide layers ~~(3)~~ that each correspond to one of said organic EL emissive elements ~~(2)~~.

5. (Presently amended) The exposure device according to claim 3, wherein said organic compound layers ~~(13, 14)~~ on a side of said electrode layer ~~(12, 15)~~ opposed to said first transparent layer ~~(5)~~ has a refractive index, n_3 , that is smaller than the refractive index of said first transparent layer ~~(5)~~, n_1 .

6. (Presently amended) The exposure device according to claim 2, wherein said organic EL emissive element ~~(2)~~ is constructed by providing said first electrode layer ~~(12)~~ overlying said substrate ~~(1)~~, providing said organic compound

layers ~~(13, 14)~~ overlying said first electrode layer ~~(12)~~, and providing said second electrode layer ~~(15)~~ overlying said organic compound layers, and

said second electrode layer ~~(15)~~ is made of a transmissive electrode material, and

said optical waveguide layer ~~(3)~~ is provided on said second electrode layer ~~(15)~~.

7. (Presently amended) The exposure device according to claim 2, wherein said optical waveguide layer ~~(3)~~ has a second transparent layer ~~(6)~~ with a refractive index of n_2 provided on said substrate ~~(1)~~ and a first transparent layer ~~(5)~~ with a refractive index of n_1 generally surrounded by said second transparent layer, and

said organic EL emissive element ~~(2)~~ is constructed by providing said first electrode ~~(52)~~ overlying said optical waveguide layer ~~(3)~~, providing said organic compound layers ~~(53, 54)~~ overlying said first electrode layer ~~(52)~~, and providing said second electrode layer ~~(55)~~ overlying said organic compound layers ~~(53, 54)~~.

8. (Presently amended) The exposure device according to claim 7, wherein a groove is provided in said substrate ~~(1)~~, and said second transparent layer ~~(6)~~ and said first transparent layer ~~(5)~~ are provided within said groove.

9. (Presently amended) The exposure device according to claim 8, wherein a light-absorbing shading film is provided between an inner wall surface of said groove and said second transparent layer ~~(6)~~.

10. (Presently amended) The exposure device according to claim 1, having a shading wall ~~(16)~~ that is non-transmissive to light and light-absorbing between adjacent ones of said organic EL emissive elements ~~(2)~~.

11. (Presently amended) The exposure device according to claim 1, wherein said organic compound layers have

a three-layer structure of an emitting layer ~~(46)~~ with a refractive index of n_4 and sandwiching layers ~~(43, 44)~~ with a refractive index of n_5 sandwiching said emitting layer ~~(46)~~ and having electron and hole transporting materials mixed together,

the refractive index of said emitting layer ~~(46)~~, n_4 , and the refractive index of said sandwiching layers ~~(43, 44)~~, n_5 , satisfy the relationship of $n_4 > n_5$, and

said exposure device has a shading wall ~~(16)~~ that is non-transmissive to light and light-absorbing between adjacent ones of said organic EL emissive elements.

12. (Presently amended) The exposure device according to claim 1, wherein said substrate ~~(1)~~ is a single-crystal silicon substrate or a polycrystalline silicon substrate.

13. (Presently amended) An image forming device including an exposure device and a photosensitive material exposed to light by said exposure device, said exposure device comprising:

a substrate ~~(1)~~;

an emissive element array provided on said substrate ~~(1)~~ and having a plurality of organic EL emissive elements ~~(2)~~ arranged linearly; and

a drive circuit ~~(4)~~ provided on said substrate ~~(1)~~ and including an element switching said organic EL emissive element ~~(2)~~,

wherein said organic EL emissive element ~~(2)~~ has an edge emission structure emitting light in an edge direction that is perpendicular to a direction of deposition of electrode layers ~~(12, 15)~~ and organic compound layers ~~(13, 14)~~, and

an emitting area of one emissive element, (S), as viewed in said direction of deposition, and a period of the emissive elements disposed side by side, (d), satisfy the relationship of $S > d^2$.